



# HYPERXITE

## CHANGING THE FUTURE OF TRANSPORTATION



Advisors: Roger Rangel, Jack Brouwer, George Meier, Kenneth Mease, Lorenzo Valdevit, Farzin Zareian, Daniel Mumm

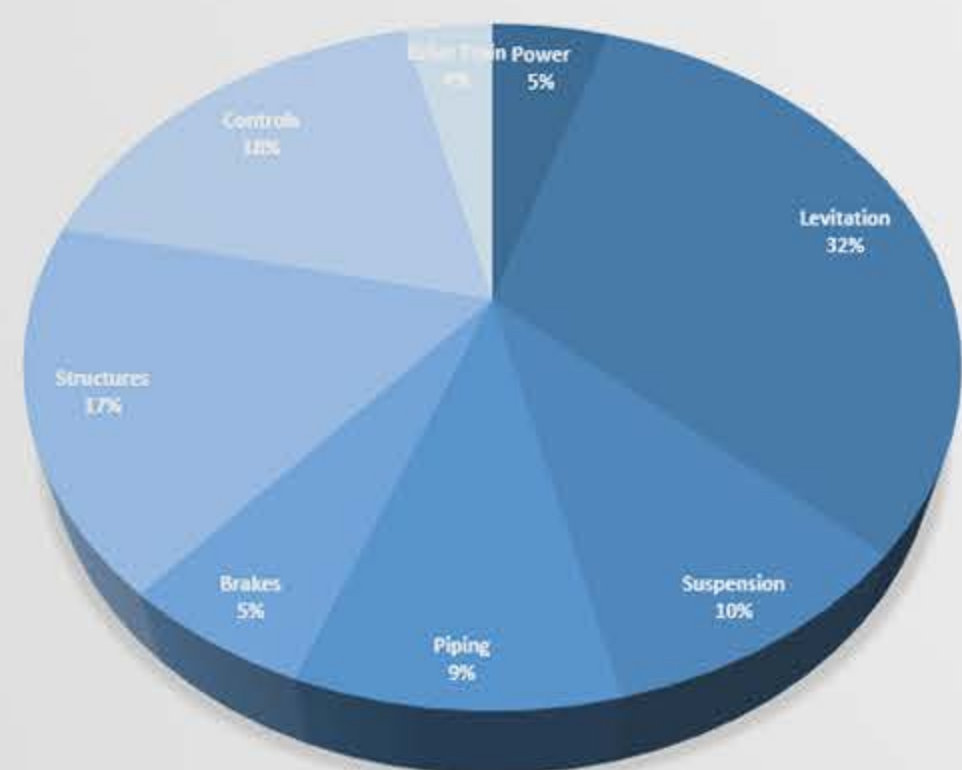
### GOALS

- To win first place at the SpaceX Hyperloop Pod Competition in both overall point total and speed.
- To accelerate the development of a fast, economical, and sustainable transportation system.

### OBJECTIVES

- Design and build a 1:2 scale Hyperloop pod that utilizes air based levitation and is optimized for a 1 mile test track.
- Educate and train students in simulation and advanced manufacturing
- Collaborate with industry partners and students from many disciplines

### BUDGET BREAKDOWN



POD COST: \$53,306

- Power
- Structures
- Suspension
- Brakes
- Controls
- Piping
- Levitation
- Drive Train

### POWER

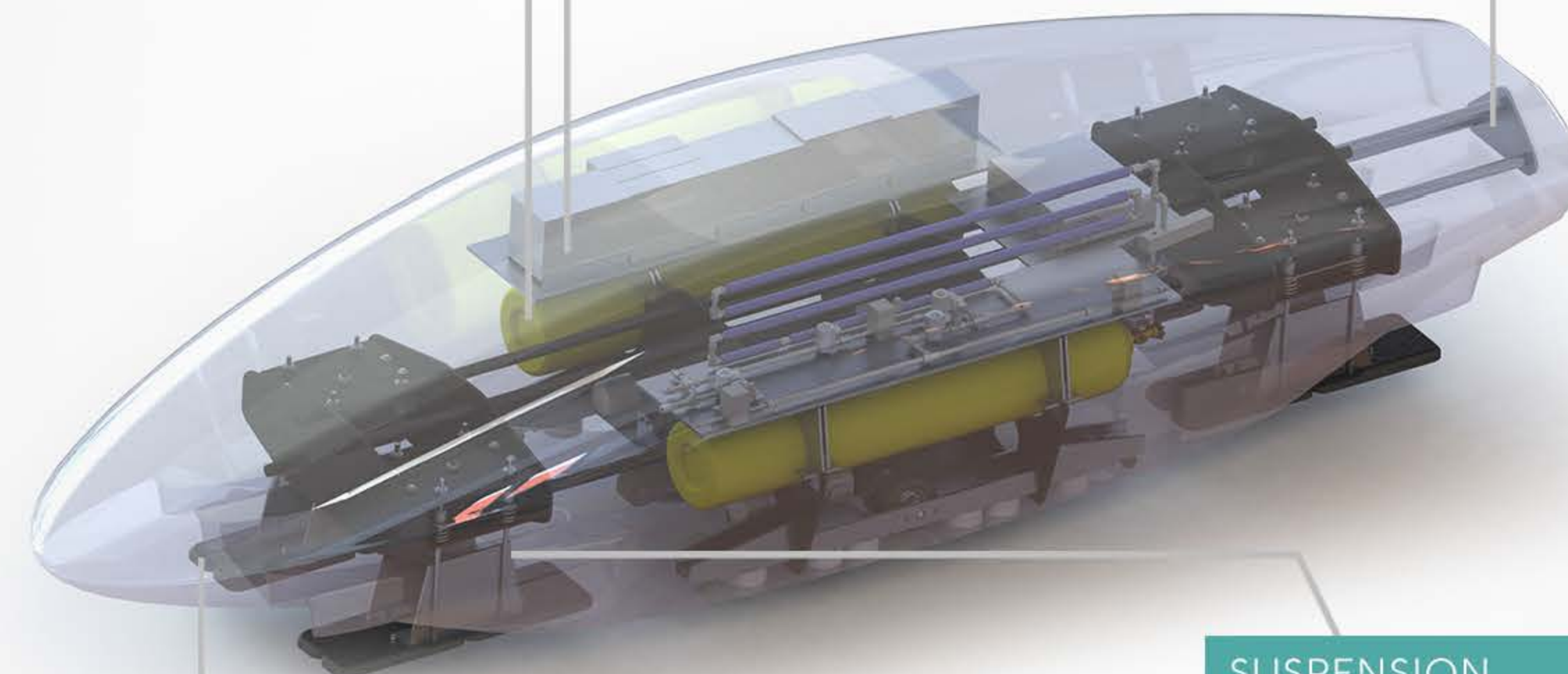
The power system consists two compressed air tanks, one auxiliary tank, and two rechargeable battery packs.

### CONTROLS

The control system manipulates actuators and valves to control the velocity, lateral stability and levitation of the pod.

### STRUCTURES

The structure of the frame is designed to include a strong inner core from which carbon sandwich plates and aluminum are extended to support the other systems.



### LEVITATION

Air bearings are surrounded by skirts to maintain a constant height of 2.5mm above the surface.

### SUSPENSION

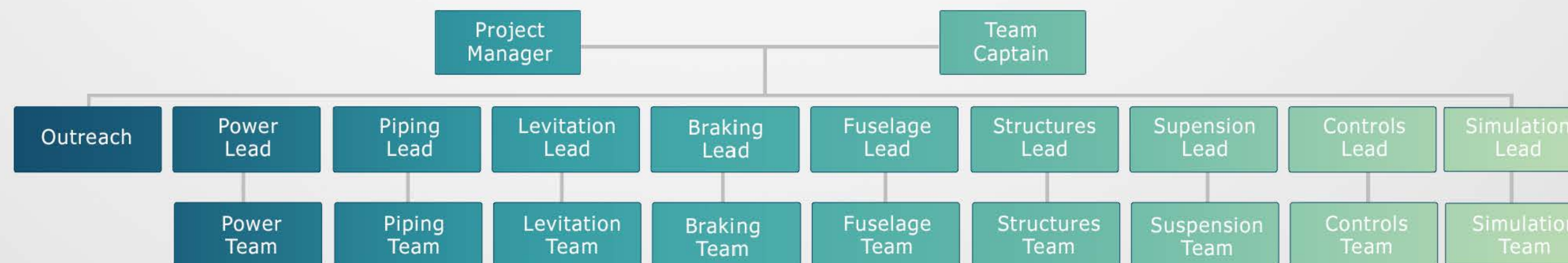
This system, containing one air spring and four metal springs, is designed to have two capabilities: vibration dampening and semi-instantaneous retraction.

### TEAM PHOTO



### TEAM MEMBERS

|                    |                         |
|--------------------|-------------------------|
| Anthony Cirillo    | Ke Quan                 |
| Austin Johansen    | Kevin Gonzalez          |
| Bander Linjawi     | Maddy Sando             |
| Brandon Hastings   | Margarito Guzman        |
| Calvin Nguyen      | Matthew Lawrence Gill   |
| Charleston Tran    | Mossab Khalid A Alsaedi |
| Danny Nguyen       | Nathan Sharifrazi       |
| David Nguyen       | Nick Parks              |
| Dean Defuria       | Nima Mohseni            |
| Eric Romano        | Patricio Guerrero       |
| Gabriel Buenviaje  | Peter Phillips          |
| Gabriel Pillitiere | Peyman Pourrajab        |
| Hugo Rodriguez     | Saede Mir               |
| Jacob Gantz        | Shramana Ghosh          |
| James Harvey       | Steve Cho               |
| Jasmine Cordero    | Takahiro Ishikawa       |
| Jonathan Gieg      | Vivian Tseng            |
| Juliana Andrews    | Wesley Hsiao            |
|                    | Zepoor Khechadorian     |



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POSTER DESIGNED BY  
DANNY NGUYEN  
DPNGUYE2@UCI.EDU